

## CLAIMS

We claim:

1. A fuel cell system in which a fuel gas from a fuel cell is discharged from discharge means, diluted with an oxidizing gas, and discharged, comprising:  
5 abnormality detection means for detecting an operation abnormality of said discharge means; and  
change means for changing the supplied quantity of said oxidizing gas when an abnormality of said discharge means is detected.

10 2. The fuel cell system according to claim 1, wherein said abnormality detection means detects that the discharged quantity of the fuel gas become larger than a predetermined quantity due to operation failure of said discharge means.

15 3. The fuel cell system according to claim 2, wherein said change means increases the supplied quantity of said oxidizing gas when said operation abnormality is detected.

20 4. The fuel cell system according to claim 3, wherein the increased quantity of said oxidizing gas is a quantity that can inhibit the occurrence of an abnormal oxidation reaction after the fuel gas is diluted with the oxidizing gas.

5. The fuel cell system according to claim 1, wherein the back pressure of said discharge means changes according to the supplied quantity of said oxidizing gas.

25 6. The fuel cell system according to claim 5, wherein the back pressure

of said discharge means rises with the increase in the supplied quantity of said oxidizing gas.

7. The fuel cell system according to claim 1, wherein said discharge  
5 means is a purge valve.

8. A fuel cell system comprising:  
a purge valve for discharging a fuel gas from a fuel cell as a fuel off-  
gas;  
10 a diluting device for diluting said fuel off-gas discharged from said  
purge valve with an oxidizing off-gas from said fuel cell;  
means for determining the required output quantity of said fuel cell;  
oxidizing gas supply means for supplying the oxidizing gas to said  
fuel cell in a supply quantity corresponding to said required output quantity;  
15 abnormality detection means for detecting an operation abnormality of  
said purge valve; and  
oxidizing gas supply increase means for increasing the supplied  
quantity of said oxidizing gas when an abnormality of said purge valve is detected.

20 9. The fuel cell system according to claim 7, further comprising:  
means for determining the load required quantity of said fuel cell  
system;  
means for determining an auxiliary unit power quantity of said fuel cell  
system; and  
25 means for determining said required output quantity based on said  
determined load required quantity and said auxiliary unit power quantity.

10. A method for controlling a fuel cell system in which a fuel gas from a fuel cell is discharged from discharge means, diluted with an oxidizing gas, and discharged, comprising the steps of:

- 5                    detecting an operation abnormality of said discharge means; and  
                     changing the supplied quantity of said oxidizing gas when an abnormality of said discharge means is detected.